SONY

VideoStore™

MPEG-2 Encoder, Decoder, and Server ALL IN ONE

VSR-2000

Multi Access Video and Audio Server

VSR-2000 is a second-generation, Multi-access Video and Audio Server from the Sony VideoStore Series. With an MPEG-2 Encoder, Decoder and Storage Device in one compact body, the VSR-2000 provides outstanding functionality at an affordable price. However, all the many features that make the VSR-2000 attractive to professional users are very easy to operate, so that first-time users will have no difficulty in taking full advantage of this functionality.

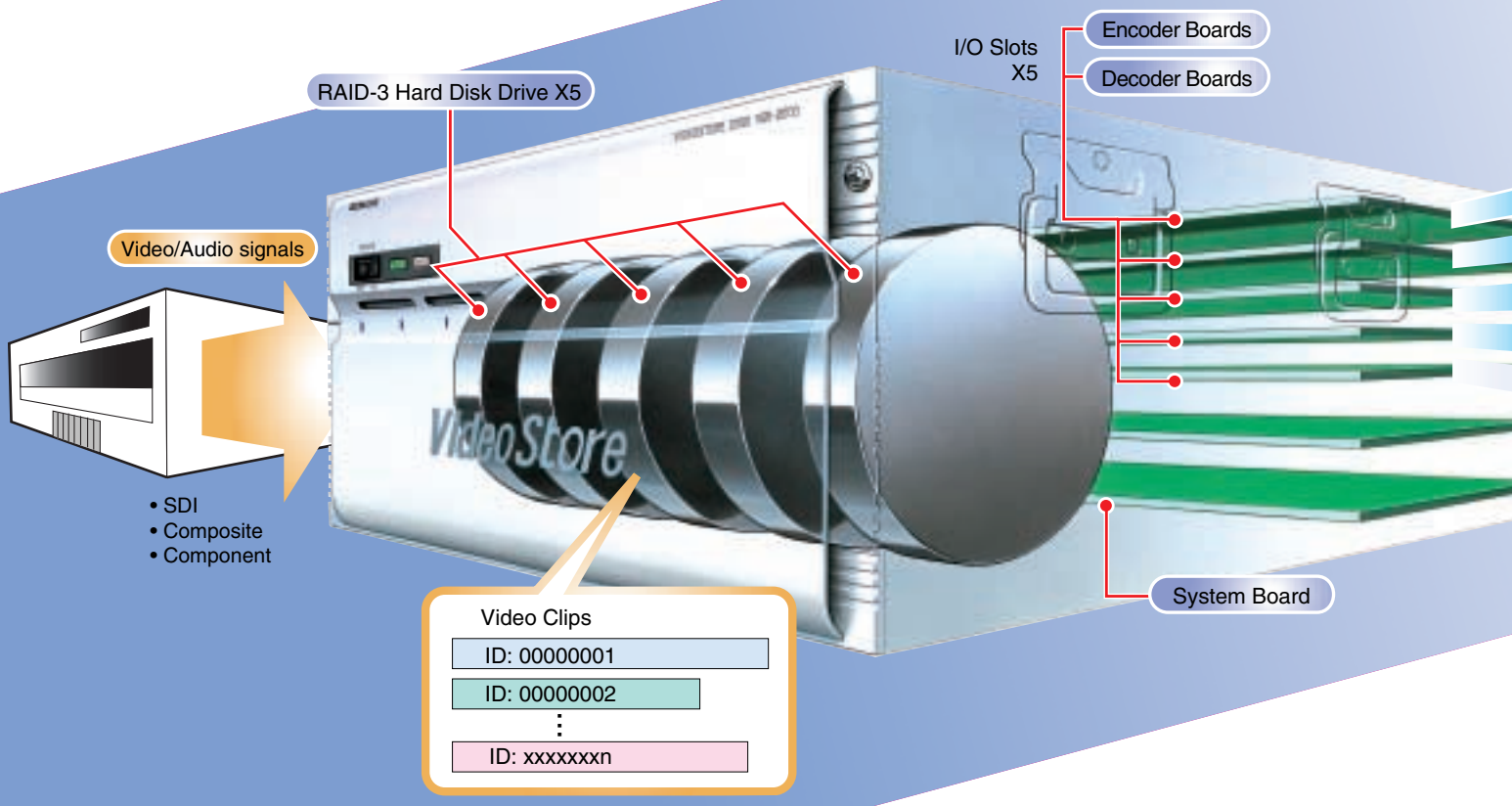
The introduction of the VSR-2000 extends the application of video servers to many fields, such as CATV stations, large-screen displays, education, training, business presentations, conferences, and entertainment. The VSR-2000 is able to support creative image communication in its role as a powerful core machine.

MPEG-2 (MP@ML) Standard

The VSR-2000 incorporates an original Sony encoder IC, designed in accordance with the MPEG-2 (MP@ML) standard. With the wide-range motion estimation function of this IC, the VSR-2000 provides excellent picture quality, even with fast-moving subjects. This is of particular importance with the rapid horizontal movements that are very common in images from sporting events. Optional encoder boards accept SDI or analog (composite and component) input signals.

MPEG-2 Encoder, Server, and Decoder all in o

— Multi-access Video and Audio Server at the core of the digital image era —



VideoStore

●Rear Panel

Variable Bit Rates

For optimum encoding, the bit rate can be selected to be either 2 Mb/s, 4 Mb/s, 6 Mb/s, or 8 Mb/s. The bit rate can be set individually for each clip, and clips encoded at different bit rates can be stored in the same server. Back-to-back playout of these clips is provided, without the signal going to black between clips.

●Recording times with 36 GB Hard Disk Unit

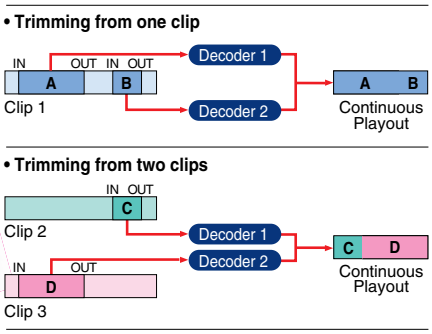
All encoding at **2** Mb/s: approx. **93** hours
All encoding at **4** Mb/s: approx. **58** hours
All encoding at **6** Mb/s: approx. **41** hours
All encoding at **8** Mb/s: approx. **30** hours

RAID Level 3 Technology — High Reliability

Five hard disk units are used in the VSR-2000, and RAID level 3 technology is adopted for the disk array. This ensures that even when one of the hard disk units is damaged, the remaining four units compensate for the missing data so that operations can continue. A damaged hard disk unit can be 'hot swapped' with a replacement unit. All five 9 GB hard disks can be replaced with units of 18 GB (x5) or 36 GB (x5) capacity to extend the recording time.

Playout Functions

The VSR-2000 has several very useful playout functions. A Trimming function allows playout from specified In Points and Out Points, and a Continuous Playout function provides playout from one segment to another, with no black between segments. (See the figure below.) A Shuttle function provides quick Search and Pause.



With the Trimming function, the required segment of a clip can be selected and played back. Trimmed clips can be played back without black in between the segments.

RS-232C/RS-422A Control

The VSR-2000 has both an RS-232C and an RS-422A interface. Control of encoding and multi-channel playout can be executed via these connections.

Flexible Inputs and Outputs

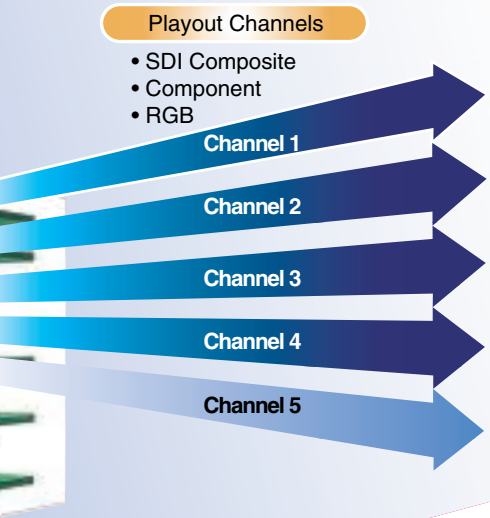
With five slots for optional boards, various configurations can be realized. Fitted with one encoder board and four decoder boards, four-channel playout is provided. With five decoder boards, five-channel playout is also possible. Output board options provide analog (composite, component, R/G/B) or SDI signals, allowing you to use the VSR-2000 for many different applications.

Supports 10Base-T and 100Base-T

The MPEG-2 file data of the VSR-2000 can be transferred via Ethernet (10Base-T or at high speed at 100baseT). With VSR-2000 units installed at both a central encoding site and at remote sites, a video source can be shared by all the sites via network. If the remote sites are unattended, reduced labor costs can be expected.

DVB-ASI Ready

To comply with future use in multiple-channel broadcasting of cable television, the VSR-2000 will be ready to accept and output a DVB-ASI, MPEG-2 Transport Stream when equipped with an optional board to be released in the future.



The VSR-2000 opens up many fields in the application of video storage —

Specifications

Input (Encoder) (1ch)

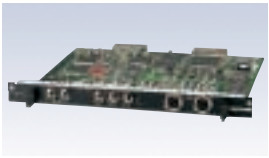
Video	
Signal (BKSR-2021)	Analog composite: BNC (x1) Analog component: BNC (x3)
(BKSR-2020)	SDI: BNC (x1)
Encode format	MPEG-2 MP@ML
Bit rate	2.0/4.0/6.0/8.0 Mb/s
Image size	ITU REC 601 NTSC: 720 pixels x 480 lines PAL: 720 pixels x 576 lines
Aspect ratio	4:3
Audio	
Signal (BKSR-2021) (BKSR-2020)	Analog (2ch): XLR 3-pin (x2) Male SDI (Embedded with video)
Encode format	MPEG-1, Audio layer II
Bit rate	384 Mb/s
Sampling frequency	48 kHz

Output (Decoder) (4ch, Max. 5ch)

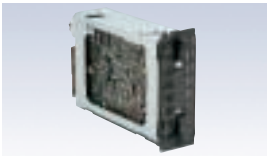
Video	
Signal (BKSR-2031)	Analog composite (2ch): BNC (x2) Analog component (1ch) or RGB (1ch): BNC (x3)
(BKSR-2030)	SDI: BNC (x1)
Audio	
Signal (BKSR-2031) (BKSR-2030)	Analog (2ch): XLR 3-pin (x2) Male Digital (2ch): SDI-embedded Analog (2ch): XLR 3-pin (x2) Male
Hard Disk Drive Unit	
Storage Capacity	
BKSH-209G	9 GB (x5): 45 GB (Recording capacity: 36 GB)
BKSH-218G	18 GB (x5): 90 GB (Recording capacity: 72 GB)
BKSH-236G	36 GB (x5): 180 GB (Recording capacity: 144 GB)
Control Signal	
REMOTE	D-sub 9-pin RS-232C (Male) RS-422A (Female) switchable
VTR REMOTE	D-sub 9-pin RS-422A (Female)
General	
Power requirement	AC100 V to 240 V, 50/60 Hz
Power consumption	500 W
Dimension (w x h x d)	424 x 221 x 655 (mm), 16 3/4 x 8 3/4 x 25 7/8 (inches)

Optional Accessories

SDI MPEG Encoder Board
BKSR-2020



Analog MPEG Decoder Board
BKSR-2031



9GB HDD Unit
BKSH-209G

Analog MPEG Encoder Board
BKSR-2021

SDI MPEG Decoder Board
BKSR-2030

100BaseT Board
BKSR-2070

DVB-ASI Board
BKSR-2090

18 GB HDD Unit
BKSH-218G

36 GB HDD Unit
BKSH-236G

Rack Mount Kit
RMM-2000

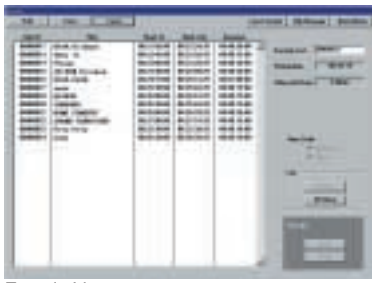
The optional playout control software eases the management of clips and playlists

Playout Control Software
BZSR-2000

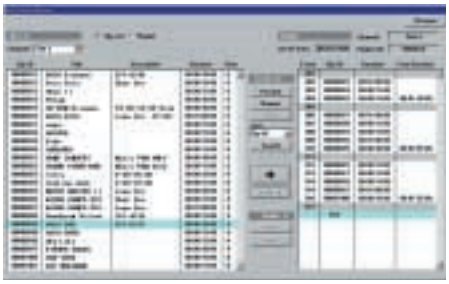
BZSR-2000 has all the basic functions for clip management, playlist creation, and playout monitoring of the VSR-2000. The functions required to transfer clip data via Ethernet (FTP) from one VSR-2000 to other VSR-2000 units is also included as standard.

Main Menu

Clip Encoding

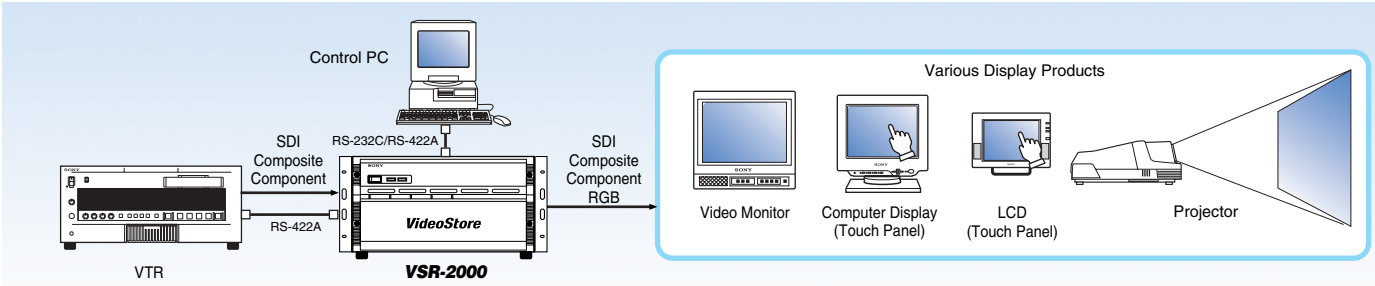


Encode List



Playlist creation and management

System Configuration



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